5

10

ELECTROMAGNETIC PUMP

Abstract of the Disclosure

An electromagnetic pump has a supply section and a magnetic force pumping section wherein flow of a electrically conductive material through the supply section is opposite to the flow of the material in the magnetic force pumping section in some examples. Multiple coils surround the supply and magnetic force pumping sections. Current flowing through the multiple coils creates magnetic fields that magnetically couple with a magnetic material disposed between the supply and magnetic force pumping sections so that the fields penetrate the electrically conductive material in the magnetic force pumping section substantially perpendicular to the desired flow direction which maximizes the magnitudes of magnetic forces applied to the electrically conductive material.